

# PARTICLE SIZE ANALYZER

## CILAS 990

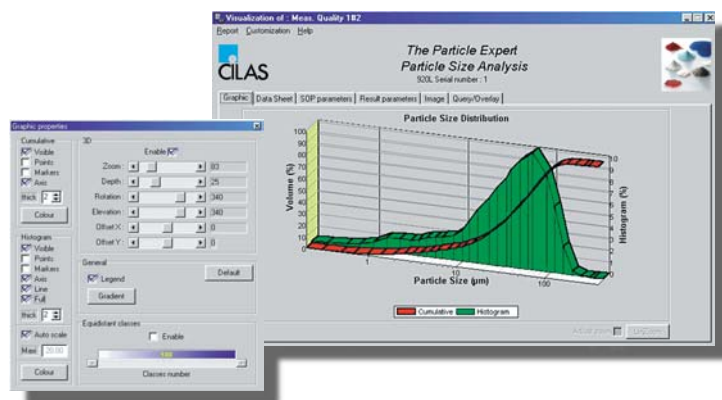
This particle size analyzer, compact, easy, fast and very reliable will be your ideal tool for everyday size analysis.



- Range : 0.2 - 500  $\mu\text{m}$  with 70 classes
- High resolution with new designed detectors
- Short bench : 40 cm, no realignment required
- Easy for use and maintenance
- Wet and Dry module available
- Compliant to ISO 13320 Norm
- Compact, robust

### 990 Innovative Software

This friendly and intuitive software will simplify your measurement process by offering :



- Advanced and fast SOPS management
- Powerful custom report facilities
- Easy and intuitive display functions
- HTML, Excel files generation
- Windows XP, NT, 2000 compatibility
- CFR 21 Part 11 compliance

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### SPECIFICATIONS

<b>Principal of measurement</b>	Laser diffraction – Based on Mie and Fraunhofer scattering theories.
<b>Operating specifications</b>	
Size range ( $\mu\text{m}$ )	0.2 - 500
Liquid mode	0.2 - 500
Dry mode	0.3 - 500
Dispersion type	venturi
Amount of sample required	
Liquid mode	< 5 g
Dry mode	< 20 g
Standard deviation	
Repeatability	< 1 %
Reproducibility	< 3 %
Proper operation	
Temperature	+ 10 to + 40° C
Humidity	0 to 90 %
Acquisition time	
Liquid mode	programmable to 1 second up to 20 min.
Dry mode	
<b>Technical specifications</b>	
Number of lasers	1
Laser source	Fiber laser diode
Wavelength	830 nm
Power	3 mW
Peristaltic pumps	typical 120 rpm (adjustable from 30 to 240 rpm)
stirrer	adjustable from 180 to 500 rpm
Ultrasonic	continuous or pulsed, frequency 38 KHz, adjustable power and programmable up to 50 W
Power	110/240 V / 50/60 Hz
Interface	1 serial port RS232 or USB adaptor
Windows® Environment	98, XP Pro, NT4, 2000
<b>External dimensions</b>	
Length/width/height/weight	830 mm / 560 mm / 480 mm / 50 kg (33 in / 22 in / 19 in / 110 lbs)
<b>Safety certification</b>	
Laser	
Closed cover	Classe I of NF EN 60025-1
Opened cover	(safety shunt) Classe III of NF EN 60685
Electric	Classe B of NF EN 61010-1 & EN 61326
Fire	Classe VO of UL94

### ACCESSORIES

- Video Camera : for visualizing shape.
- Small volume unit : 50 ml for aggressive solvents and high-cost samples.
- Alcohol recirculator : to decrease the cost of alcohol, when analyzing hydrophilic particles.
- Auto sampler : 28 cups for unattended analysis.
- Remote control module to increase productivity.

### CILAS RANGE

- CILAS 990 : standard system for process control for a measuring range 0.3 to 400  $\mu\text{m}$ .
- CILAS 1090 : with dual sequenced laser system for a measuring range 0.04 to 500  $\mu\text{m}$ .
- CILAS 1190 : integrates 2 high technologies, laser diffraction and CCD camera for a measuring range from 0.04 to 2.500  $\mu\text{m}$ .

Many tasks are performed automatically by the particle size analyzer, such as cleaning, rinsing, and system checking. Designed to be robust and field proven, our particle size analyzers require very little maintenance.

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